

REMARKS

This is intended as a full and complete response to the Office Action dated September 8, 2003 (hereinafter "the Office Action"), having a shortened statutory period for response set to expire on December 8, 2003. A petition for a one-month extension of time accompanies this Amendment, and in the event that such petition does not accompany this Amendment, the Commissioner is authorized to charge the above-identified deposit account to make this Amendment timely. Claims 24, 30-31, 33-34, and 36-37 have been canceled without prejudice. Accordingly, claims 1-23, 25-29, 32, and 35 remain in the above-captioned application.

In the Office Action claims 1-37 were rejected under 35 U.S.C. 102(b) as being anticipated by Herrmann et al. (U.S. Pat. No. 6,182,247, hereinafter "Herrmann"). Herrmann states in relevant part "... a technique for embedding a logic analyzer in a programmable logic device ... that allows debugging of such a device ..." and "... provides both an apparatus and a technique by which a logic analyzer circuit is automatically embedded within a PLD, by which it captures and stores logic signals, and by which it unloads these signals through an interface to a computer." (Herrmann, col. 3, line 62 - col 3, line 3 and at Fig. 5, element 18)

Notably, according to Herrmann, it is an external computer which preferably "...performs the analysis function of a logic analyzer" and "[t]he circuitry provided on the PLD interior merely provides the data acquisition component of the logic analyzer." (Herrmann, col. 15, lines 13 - 17). Herrmann goes on to state that "... the logic necessary for data analysis could be provided on the PLD, in which case the external computer could be used merely to (a) control the state of the logic analyzer and (b) view information output by the logic analyzer. (Herrmann, col. 15, lines 18 - 21). In short, Herrmann describes a computer, external to a PLD, that "... performs the

analysis function of the logic analyzer...", and in the alternative Herrmann suggests that such PLD external computer is used to merely to "... control the state of the logic analyzer" and to view information output.

In Herrmann's suggested example, state of a logic analyzer is controlled by an external computer. Notably, a trigger, or "trigger condition" as in Herrmann (see, Herrmann at col. 10, lines 48-52), describes a state of a device.

Claims 1, 11, 21, 25, 29, 32, and 35, have been amended to indicate that an FPGA-based SoC includes a processor.

Independent claims 1, 11, 29, 32, and 35 have been amended to indicate that at least one trigger is included which is subject to control by the processor. Independent claim 21 has been amended to indicate that the processor is for carrying out instruction of a software core where the instruction includes control of one or more triggers. Independent claim 25 has been amended to indicate that triggers are defined and subject to control by the processor.

It is respectfully submitted that Herrmann does not show, describe or suggest an FPGA-based SoC having a processor for control of state of a logic analyzer, such as at least one trigger, as claimed amended claims 1, 11, 29, 32, and 35, or triggers, as claimed in amended claims 21 and 25.

Furthermore, with respect to the rejections of claim 24, and that of claims 30 and 31, as enumerated in the Office Action at paragraphs 13 and 15, respectively, the basis for these rejections is not entirely clear. Assuming *arguendo* the intended basis for the rejections is that Herrmann discloses a computer system and that an embedded processor is for purposes 35 U.S.C. 102(b) anticipated by a computer system containing a processor, then Applicants disagree.

In contrast to Herrmann's suggested example, external monitoring and analysis of conditions is not the same or even an equivalent of internal monitoring. Internal monitoring may be done at rated speed of a device, without exposure to externally introduced noise, and without added delay due to signal

propagation out of and responsively into a device. Inability to operate at rated speed, or introduction of wait states or noise or both, or any combination thereof changes device function. On the other hand, internal monitoring and analysis of conditions advantageously may provide a different result, as it is more accurate than external monitoring and analysis.

Of course, the rejections of claim 24, 30, and 31 are now moot owing to cancellation of those claims without prejudice.

In view of the foregoing amendments and arguments it is respectfully submitted that each of the rejections contained in the Office Action of independent claims 1, 11, 21, 25, 29, 32 and 35 is overcome, and that these claims are allowable over Herrmann. Claims 2-10 are allowable at least for the above-mentioned reasons as being directly or indirectly dependent on allowable independent claim 1. Claims 12-20 are allowable at least for the above-mentioned reasons as being directly or indirectly dependent on allowable independent claim 11. Claims 22-24 are allowable at least for the above-mentioned reasons as being directly or indirectly dependent on allowable independent claim 21. Claims 26-28 are allowable at least for the above-mentioned reasons as being directly or indirectly dependent on allowable independent claim 25.

Applicants are submitting a Supplemental Information Disclosure Statement with this response.

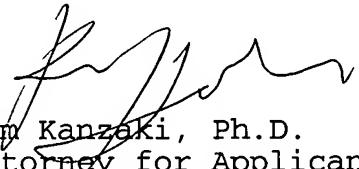
Having addressed all issues set out in the Office Action, Applicants respectfully submit that the claims are in condition for allowance. Accordingly, it is respectfully requested that the application be passed to allowance.

CONCLUSION

All claims should be now be in condition for allowance and a Notice of Allowance is respectfully requested.

If there are any questions, the applicants' attorney can be reached at Tel: 408-879-6149 (Pacific Standard Time).

Respectfully submitted,

  
Kim Kanzaki, Ph.D.  
Attorney for Applicants  
Reg. No. 37,652

*I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on January 6, 2004.*

Pat Slaback  
Name

  
Signature